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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/720,857	11/24/2003	Pravas Pradhan	112055-0073U	5180
24267	7590	09/12/2005	EXAMINER	
CESARI AND MCKENNA, LLP 88 BLACK FALCON AVENUE BOSTON, MA 02210			LAM, TUAN THIEU	
			ART UNIT	PAPER NUMBER
			2816	

DATE MAILED: 09/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/720,857

Applicant(s)

PRADHAN ET AL.

Examiner

Tuan T. Lam

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-16 and 18 is/are rejected.
- 7) ☒ Claim(s) 8 and 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8/26/2005</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This is a response to the amendment filed 8/3/2005. Claims 1-18 are pending and are under examination.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-7, 9-16 and 18 remains rejected under 35 U.S.C. 103(a) as being unpatentable over Talbot et al. (USP 6,448,815) in view of Mitsuo (JP 07-307661), both prior art of record.

Figure 1 shows a current mode transfer logic transmission line driver system comprising a transmission line (22), defining at least a first and a second signal carrying conductor, the transmission line defining a characteristic impedance (the transmission line has its own characteristic impedance), means for selectively driving unequal current through the first and second signal carrying conductors, respectively (differential current signals O and O/ are having unequal magnitude at any particular instant in time, thus, anticipates the limitations of unequal currents carried by the first and second carrying conductors 32A, 32B), means for receiving current (conductor wires connected to the input of the amplifier 36), a terminating resistor (R3), and a receiver (36).

The Talbot et al. reference does not show the details of the receiver (36) comprising a means for receiving currents and means for sensing the received currents as called for in claims 1 and 10. Figure 11 of Mitsuo shows a high speed receiver (5) having a quick transfer rate,

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comprising first and second current receiving circuits (P51, P52; P53, P54) and means for sensing (N51, N52 and IV51). Therefore, it would have been obvious to a person skilled in the art at the time of the invention was made to use Mitsuo's receiver circuit for receiving the transmitted currents for the purpose of increasing the transfer speed.

Regarding claims 2 and 11, the combination of Talbot et al. and Mitsuo shows the first and second current sources (adjustable R1 and R2 of Talbot et al.) selectable coupled the transmission line by the transistors (30A to 30D).

Regarding claims 3 and 12, the combination of Talbot et al. and Mitsuo shows first and second receiving current circuits (P51, P52; P53, P54) coupled between the transmission line and return path conductor (ground).

Regarding claims 4 and 13, the combination of Talbot et al. and Mitsuo shows the first and second diodes P51 and P54.

Regarding claims 5 and 14, the combination of Talbot et al. and Mitsuo shows means for biasing as transistors P52 and P53 such the distal ends of the transmission line has lower impedance than the characteristic impedance.

Regarding claims 6 and 15, the combination of Talbot et al. and Mitsuo shows means for comparing (N51, N52) providing a difference current at the node ND53.

Regarding claims 7 and 16, the current mirror N521 and N52 and the inverter IV51 amplifies the difference current.

Regarding claims 9 and 18, the transmission line has its own impedance characteristic with respect to the return path (ground). The return path connected to ground via the selectable transistors.

Response to Arguments

3. Applicant's arguments filed 8/3/2005 have been fully considered but they are not persuasive. Applicant argues that Talbot's invention there is only one current (I₁) traverses in one forward and reverse transmission lines, thus, fails to teach means for selectively driving unequal current through the first and second signal carrying conductors, respectively, as called for in claims 1 and 10. The specification discloses that there is a complementary current signals O and O/ traverse on first and second carrying conductors (32A and 32B, column 4, lines 30-34), Differential current signals O and O/ are having unequal magnitude at any particular instant in time, thus, anticipates the limitations of unequal currents carried by the first and second carrying conductors 32A, 32B. Thus, the rejection is deemed proper.

Allowable Subject Matter

4. Claims 8 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. In this instant, applicant's cited prior art has been carefully considered.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan T. Lam whose telephone number is 571-272-1744. The examiner can normally be reached on Monday to Friday (7:30 am to 6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, TIMOTHY P CALLAHAN can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tuan T. Lam
Primary Examiner
Art Unit 2816

9/8/2005